Texas Higher Education Coordinating Board
Faculty Salary Allocation Model J

This document is a brief, high-level description of the algorithm used by the Texas Higher Education Coordinating Board to determine the faculty cost per student credit hour of instruction for use in the university funding formula and for other purposes. For a more-detailed description of the algorithm, contact the Coordinating Board's Educational Data Center.

The input to the process consists of data from three standard Coordinating Board reports:

CBM003 Course Report This report contains data on each course offered each year. Items reported include the semester credit hour value, the weekly lecture and lab contact hour values, the discipline and level of the course.

CBM004 Class Report This report contains data on each course section offered each semester. Items reported include the semester credit hour value, the enrollments by level, the type of course, and a pointer to the faculty member teaching the course.

CBM008 Faculty Report This report contains data on each faculty member, including the salary and percentage of time allocated to teaching.

By merging these three reports, records are produced that show, for each faculty member: the total cost for teaching all sections and the credit value, SCH produced, discipline, course level, and type instruction for each section taught.

Once the total cost is apportioned among sections taught, a faculty salary cost per SCH can easily be determined by dividing the faculty salary cost for that section by the SCH associated with that section. By summing the costs for classes in each discipline and at each level and dividing by total SCH at that level, one can determine an average cost per SCH for that discipline and for that level.

Apportioning faculty salary cost simply by the semester credit hour value of the courses taught would be the easiest way. For example, if a faculty member taught two 3-hour courses and one 4-hour course, 30 percent of the faculty member's salary could be assigned to each of the 3-hour courses and 40 percent could be assigned to the 4-hour course.

In practice, faculty assignments are typically more complex than that, and some courses are typically given extra weight in evaluating a faculty member's assignment. Based on the advice of an advisory committee, special activities are weighted as follows:

Factor	Weight
Large classes	
61-80 students	1.2
81-100 students	1.4
101=140 students	1.6
141-200 students	1.8
over 200 students	2.0
Graduate classes	1.25
Independent study	0.1

Because small classes can have an inappropriate effect on costs per SCH, data for a given discipline and level is not used if the total SCH generated for that discipline at any institution is less than 100 SCH at the undergraduate level and is less than 50 SCH at the graduate level.

Examples:

Prof. Adams teaches a 3-hour undergraduate class and a 3-hour graduate class. Prof. Adams is teaching the equivalent of (3 + 1.25 x 3) = 6.75 hours. In this case, 3/6.75 = 44 percent of Prof. Adams' salary would be allocated to the undergraduate class and 56 percent would be allocated to the graduate class.

Prof. Brown teaches two 3-hour undergraduate classes and supervises two masters candidates, each of whom is registered for 9-hours of thesis (individual study). Each of the 9-hour thesis supervisions would be the equivalent of (9 x .1 x 1.25) = 1.12 hours of instruction, so Prof. Brown is teaching the equivalent of (3 + 3 + 1.12 + 1.12) = 8.24 hours. In this case 3/8.24 = 36 percent of his salary would be allocated to each of the undergraduate courses and 1.12/8.24 = 14 percent to each graduate thesis (class).

Prof. Carmel teaches a 3-hour undergraduate class, another 3-hour undergraduate class with 152 students enrolled, and a graduate 2-hour class. He is teaching the equivalent of (3 + 1.8 x 3 + 1.25 x 2) = 10.9 hours. Then, 50 percent of Prof. Carmel's salary would be allocated to the large undergraduate course; 28 percent would be allocated to the other undergraduate course, and the balance to the graduate course.

Prof. Dun is 80 percent on the academic budget and 20 percent on a research budget and teaches a 3-hour undergraduate course and a 3-hour graduate course. Prof Dun teaches the equivalent of (3 + 1.25 x 3) = 6.75 hours. Since Prof. Dun is 80 percent on the academic budget, (.8 x 3/6.75) = 36 percent of his salary would be allocated to the undergraduate course and 44 percent would be allocated to the graduate course.

Prof. Music teaches two 2-hour independent study undergraduate classes with 1 and 6 enrollments respectively and supervises one masters candidate, who is registered for 6-hours of thesis (individual study) and teaches a 3-hour graduate course. In independent study classes the enrollment is multiplied times the credit hour of the class times the independent factor so the undergraduate classes would be calculated as follows (6 x 2 x .1 = 1.2) and (1 x 2 x .1 = .2). The 3-hour graduate course generates (3 x 1.25 = 3.75) workload. The 6-hour thesis supervision would be the equivalent of (6 x .1 x 1.25) = .75 hours of instruction, so Prof. Brown is teaching the equivalent of (1.2 + .2 + .75 + 3.75) = 5.9 hours. In this case 1.4/5.9 = 24 percent of his salary would be allocated to the undergraduate courses and .75/5.9 = 13 percent to the graduate thesis (class) and 3.75/5.9 = 63 percent for the other graduate course.

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